

```

1 package semaphore.trafficLight.control;
2
3 import java.util.Timer;
4 import java.util.TimerTask;
5
6 import semaphore.trafficLight.TrafficLight;
7 import semaphore.util.TurnOnOff;
8
9 public class SimpleTrafficLightControl implements TrafficLightControl {
10
11
12     private State state = State.OFF;
13     private final TrafficLight trafficLight;
14     private final TurnOnOff green, yellow, red;
15
16     public SimpleTrafficLightControl (TrafficLight trafficLight)
17     {
18         this.trafficLight = trafficLight;
19
20         this.green = trafficLight.spotGreen();
21         this.yellow = trafficLight.spotYellow();
22         this.red = trafficLight.spotRed();
23     }
24
25     @Override
26     public void turnAlert() {
27
28         if(state == State.ALERT)
29             return;
30
31         this.reset();
32         this.configureAlert();
33         state = State.ALERT;
34
35     }
36
37     private Timer timer = null;
38
39     private void configureAlert() {
40
41         timer = new Timer();
42         timer.scheduleAtFixedRate(new TimerTask() {
43
44             @Override
45             public void run() {
46                 trafficLight.spotRed().turnOff();
47                 trafficLight.spotGreen().turnOff();
48
49                 if (trafficLight.spotYellow().isOn())
50                     trafficLight.spotYellow().turnOff();
51                 else
52                     trafficLight.spotYellow().turnOn();
53             }
54         }, 0, 1_000);
55     }
56
57     private void stopAlert() {
58
59         if (timer != null) {
60             timer.cancel();
61
62             trafficLight.spotYellow().turnOff();
63
64         }
65     }

```

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66
67 private void reset() {
68
69     if (state == State.ALERT)
70         stopAlert();
71
72     green.turnOff();
73     yellow.turnOff();
74     red.turnOff();
75
76     state = State.OFF;
77 }
78
79 @Override
80 public void turnGreen() {
81
82     this.reset();
83     trafficLight.spotGreen().turnOn();
84     state = State.GREEN;
85 }
86
87 @Override
88 public void turnYellow() {
89
90     this.reset();
91     trafficLight.spotYellow().turnOn();
92     state = State.YELLOW;
93 }
94
95 @Override
96 public void turnRed() {
97
98     this.reset();
99     trafficLight.spotRed().turnOn();
100    state = State.RED;
101 }
102
103 @Override
104 public void turnOff() {
105
106     this.reset();
107 }
108
109 }
110

```